



Utrecht  
University

Centre for Academic  
Teaching and Learning

# Sixth Utrecht Scholarship of Teaching & Learning Conference

7 March 2024



Onderwijs **Festival**



This booklet contains all the abstracts  
as presented during the sixth Utrecht  
Scholarship of Teaching and Learning  
conference on Thursday the 7th of  
March 2024, during Utrecht University's  
OnderwijsFestival.  
Photography: Lize Kraan

## Welcome!

*Welcome to the sixth Utrecht Scholarship of Teaching and Learning conference – a strand in the programme of the OnderwijsFestival.*

*The OnderwijsFestival is the stage for students, teachers and all of our other university staff. They come together on this day to share information and exchange ideas about the quality and developments in education, but above all to meet each other, relax and get inspired. The theme of the OnderwijsFestival 2024 is: 'Wisdom as our compass, Onderwijs blijft mensenwerk'*

*During the OnderwijsFestival, special attention will be paid to teachers and staff who are doing research on their own teaching (Scholarship of Teaching and Learning, SoTL) and want to share their (research-informed) plans, progress and results. Teachers from all disciplines are invited to present their projects aimed at promoting student learning. This entails educational projects that are research-informed (i.e. by building upon educational literature) or focused on researching education in a systematic and research-based manner.*

*Today, we aim to bring together the research on teaching and learning network at Utrecht University. We give a special welcome to colleagues from other higher education institutions in the Netherlands and abroad that join us today.*

*The SoTL abstracts were selected by a committee that developed the SoTL strand in the programme as well. The committee consisted of Harold Bok, Vincent Crone (chair), Emanuel van Dongen, Anneke van Houwelingen, Femke Kirschner, Marije Lesterhuis, Veronique Schutjens and Carlijn van den Boomen.*

*Please do not hesitate to contact us if you have any comments about the conference or suggestions for future meetings on [cat@uu.nl](mailto:cat@uu.nl) or see [www.uu.nl/cat](http://www.uu.nl/cat).*



## Educational Scholarship? Why, what and how?

This is the sixth Utrecht Scholarship of Teaching and Learning conference. The success of the conference relies on the participants and the contributions of all those teachers who are engaged with educational scholarship. Utrecht University tries to support this educational scholarship, to stimulate a research-informed teaching and learning practice. In research-informed education, disciplinary knowledge, practical knowledge and scientific knowledge are combined to enhance student learning. The aim of educational scholarship is to enlarge the knowledge-base on academic teaching.

Both Scholarship of Teaching and Learning (SoTL) and Discipline-Based Education Research (DBER) are research-informed approaches to teaching. When the aim of conducting research on your education is primarily to inform your own teaching practice, we speak about SoTL. When the aim is towards contributing to the knowledge base of teaching within your discipline, we speak about DBER. There is no strict division between these approaches, rather they form a continuum of decreasing context-specificity, see figure 1 (at the end of this booklet).

### ***What is Scholarship of Teaching and Learning?***

The main aim of the systematic approach of SoTL is to improve the teaching and learning of students. To do so, teachers are invited to examine their own classroom practice, record their successes and failures, and ultimately share their experiences so that others may reflect on their findings and build upon teaching and learning processes.<sup>1</sup> The principles of SoTL are that, based on a problem or question that teachers have about their own teaching, a research question is formulated, literature research (related to teaching in the discipline) is performed, data is collected about the effectiveness of teaching on the learning of the students, and the data is shared, either locally or wider at a conference or through a peer-reviewed publication.<sup>2</sup> In SoTL the emphasis is therefore not on general educational theory creation, but on the application of (disciplinary) educational knowledge for one's own teaching.



A typical example of the title of a SoTL-publication is: Evidence for teaching practice: The impact of clickers in a large first-year biology classroom environment.

### ***What is Discipline-Based Educational Research?***

The main aim of DBER is to contribute to the general knowledge about teaching within the discipline (and sometimes even generalizable outside your discipline). DBER thus emerges from the discipline and is grounded in the discipline's priorities, worldview, knowledge and practices. It investigates teaching and learning within a discipline and is informed by, and complementary to, general research on learning.<sup>3</sup> As is the case between SoTL and DBER, again there is no strict division between DBER and general education research, but a continuum with increasing generalizability.

DBER is often relevant for the whole disciplinary field, and sometimes even outside the field, and in contrast to SoTL the emphasis is on the generation of educational knowledge and theories in education for discipline specific academic teaching and learning.



A typical example of the title of a DBER-publication is:  
The Script Concordance test: a new tool to assess the reflective clinician.

### ***Supporting Educational Scholarship***

The Centre for Academic Teaching and Learning tries to facilitate and stimulate educational scholarship with:

1. network and community events
2. courses and programmes
3. support and resources
4. projects and visibility

#### *1. Network and community events*

Besides this SoTL conference, we bring together our active SoTL community in Special Interest Group meetings throughout the year. Utrecht University's research focus area Higher Education Research brings together discipline-based and educational sciences researchers. November 2023, Utrecht University will host the annual conference of the International Society for the SoTL (ISSOTL23).

#### *2. Courses and programmes*

To help teachers develop educational scholarship competencies, we offer both basic SoTL courses and support, as well as advanced longitudinal programmes, e.g., the Educational Research Training Programme for university teachers. Several times a year, on-site and online workshops or masterclasses are offered in order to introduce teachers to SoTL or to become more skilled in certain aspects of SoTL, e.g., during the biannual Teaching and Learning Inspiration Days.

#### *3. Support and resources*

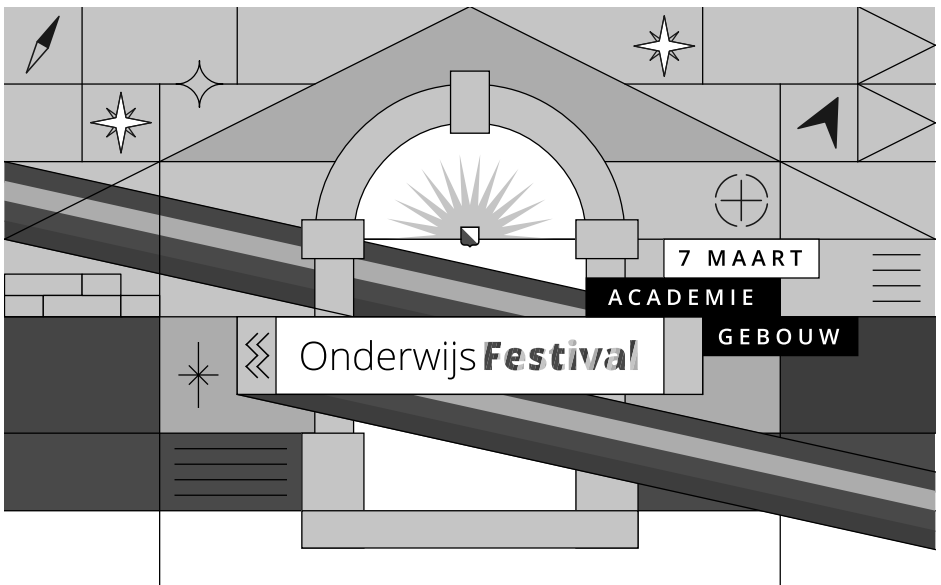
The practical step-by-step Utrecht Roadmap for SoTL, helps teachers to systematically research their own teaching practices when they want to optimise them and professionalise by gaining knowledge about their students' learning. Teachers can apply for financial support in the SoTL grant scheme, which funds methodological advice or student assistants collecting or analysing data. The Higher Education Research grants fund (pilot) research of (discipline based) educational scientists.

#### *4. Projects and visibility*

The CAT website and newsletter offers scholarship projects a platform. Also, multiple experts that focus on educational scholarship are willing to help you out, e.g., multiple educational consultants, a senior fellow and PhD student.

## References

1. Hutchings, P., & Shulman, L. E. (1999). The scholarship of teaching: New elaborations, new developments. *Change*, 31(5), 10-15.
2. Williams, K.M. (2015) *Doing research to improve teaching and Learning. A guide for college and university faculty.* 1th Ed.; Routledge: Oxon, UK
3. National Research Council (2012) *Discipline-based Education Research. Understanding and improving learning in undergraduate science and engineering.* 1th Ed.; National Academies Press: Washington, USA



► Please find the full programme of the OnderwijsFestival at [www.onderwijsfestivaluu.nl](http://www.onderwijsfestivaluu.nl)

## Programme

In the programme, some sessions focus on the Scholarship of Teaching and Learning:

### **Poster session in the Senaatzaal (10h45 – 12h15)**

*Share your perspective on which educational designs are most effective*

Do you have ideas about which teaching methods are most effective? When do you notice that you actually remember the material well? Questions like these can be researched by your teachers. During this poster session, teachers from different disciplines will present their scientific research on their own teaching in posters on a variety of topics. Here, you will have the chance to interact with them and share your perspective on their research. Who knows, you might have your own ideas on educational research and inspire your teacher to start a project. The following posters will be presented:

- I. **Crashing into PPE Interdisciplinarity?**  
*Jan Pieter Beetz*
- II. **A Model for Self-Assessment of Learning Artefacts in Higher Education**  
*Christian Köppe*
- III. **Evaluation of a bias awareness training for teachers in bio/medical education**  
*Gisela van der Velden, Özge Bilgili, Kia Malinen, Jaleesa Latupeirissa and Gönül Dilaver*
- IV. **The Market for Kidneys: Bridging Introductory Courses in Economics and Ethics**  
*Martijn Huysmans*
- V. **An audio-walk in the (Science) Park. Outdoor learning about indoor geographical perspectives?**  
*Martijn Smit and Veronique Schutjens*
- VI. **The effect of Team-Based Learning on Pharmacology Knowledge**  
*Noraly Luitjes, Gisela van der Velden and Rahul Pandit*
- VII. **University teachers' guidance of students in setting and executing self-set professional learning goals during a Challenge-Based Learning course**  
*Heleen van Ravenswaaij*
- VIII. **Digital Reading and the Twenty-First Century Historian: Doctoral Student Perspectives**  
*Hope Williard*
- IX. **Quantifying Confidence: Assessing Presentation Skills and Stress Levels in Students**  
*E.G.D. van Dongen, LL.M. Mphil PhD & B. Sichterman, MSc*
- X. **Social connectedness in higher education: evidence from first year learning communities**  
*Jet van der Zijden and Theo Wubbels*
- XI. **An update of the Scholarship of Teaching Inventory (STI)**  
*Andries S. Koster, Vincent Crone, Christel I. Lutz and Irma Meijerman*

## Programme

### **Workshop: Shape your SoTL project with the Utrecht Roadmap (13.45-14.45)**

*By Femke Kirschner and Esther van Dijk*

In this workshop, educational consultants will present the Utrecht Roadmap for Scholarship of Teaching and Learning (UR-SoTL); an instrument that will guide you through the first steps of research-informed teaching by providing information, tips, tricks, and pitfalls. You will make a start with designing your own SoTL project.

### **Ethiek sessie: Ethische dilemma's bij het doen van onderzoek (13.45-14.45)**

*Door Anneke van Houwelingen en Rik Vangangelt*

Kun je door studenten ingeleverde essays gebruiken om te analyseren? Hoe voorkom je dat studenten blootgesteld worden aan goedbedoelde maar wellicht minder effectieve interventies? Kan je als docent zowel de docent als de onderzoeker zijn? Moet je altijd je onderzoek voorleggen aan de ethische commissie?

In deze sessie gaat het publiek in gesprek over ethische dilemma's bij het doen van praktijkgericht hoger onderwijs onderzoek (ook wel Scholarship of Teaching and Learning) met Anneke van Houwelingen en Rik Vangangelt. Daarnaast delen zijn praktische tips over het vragen van ethische toestemming voor onderwijs onderzoek binnen je faculteit.

### **SoTL: Pitch session on educational research (15:00-16:15)**

*Share your thoughts on running educational research projects.*

Fifteen teachers researching their own teaching (Scholarship of Teaching and Learning, SoTL) will share their (research-informed) plans and progress in this session. In a round table setting, teachers will pitch their project and ask you and the rest of the audience to contribute your thoughts on their educational research project.

The following projects will be presented:

- I. **Needs and necessities of participants in university continuing education**  
*Hanne ten Berge, Wieger Bakker, Ineke Lam and Frans Prins*
- II. **Towards a conceptual curriculum design framework that supports the development of sustainability competencies using inter- and transdisciplinary learning**  
*Nina Bohm and Gemma O'Sullivaner*

- III. **Using ChatGPT to come to unbiased assessment of adaptive expertise**  
*Frank van Rijnsoever, Annet van Royen and Yvette Baggen*
- IV. **Equipping Economics Master students with the skills for the future**  
*Sabrina Genz and Ulrich Zierahn-Weilage*
- V. **Keeping pace in the age of innovation: Dutch student perspectives on learning AI and the position of AI in the undergraduate pharmaceutical sciences curriculum**  
*Kidwai, S., Rojas-Velazquez, D., Lopez-Rincon, A., Kraneveld. A. D. & Meijerman, I.*
- VI. **Investigating the impact of inquiry-style tutorials on student engagement**  
*Jennifer Casey*
- VII. **Cultivating Professional Identity in Life Sciences: An Innovative Approach to Education**  
*Moran T. Luengo, T.E. Voerman, K.J. Koymans, K. Boersma-van Nierop*
- VIII. **Factors contributing to university-wide introduction and expansion of SoTL**  
*Irma Meijerman, Esther van Dijk, Femke Kirschner, Vincent Crone*
- IX. **Incorporating Students as Partners in Innovation and Evidence in Education: An Elective Course** | *Irma Meijerman, Anneke van Houwelingen, Femke Kirschner, Igor Sweet, Lieke Maas, Marit van Riessen, Veronia Nasralla and Tamara Muliaditan-de Koning*
- X. **A new teaching approach for quantitative courses. A case study based on teaching Empirical Economics** | *Kattia Moreno*
- XI. **Learning Languages Without Grammar exercises? (Perceived) Effectiveness of French Language Acquisition Courses at UU** | *Marie Steffens*
- XII. **Seeds of Change: Pathways to enhance inter- and transdisciplinary learning**  
*Gemma O'Sullivan*
- XIII. **Unveiling student's preferences of different course formats through discrete choice modelling** | *Jaime Soza-Parra*
- XIV. **Travelling in the Classroom: Podcasting as an Active-Learning Tool for Interdisciplinarity** | *Tessa Diphooorn and Brianne McGonigle Leyh*
- XV. **The role of Humanities in broadening the scope of higher education research**  
*Imar de Vries, Christianne Smit, Marije van Braak, Vincent Crone, Ingrid Hoofd and Rianne van Lambalgen*



## Submitted abstracts

On the following pages you can find the abstracts of completed research projects.

### **I. Crashing into PPE Interdisciplinarity?**

*Jan Pieter Beetz*

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### **II. A Model for Self-Assessment of Learning Artefacts in Higher Education**

*Christian Köppe*

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### **III. Evaluation of a bias awareness training for teachers in bio/medical education**

*Gisela van der Velden, Özge Bilgili, Kia Malinen, Jaleesa Latupeirissa and Gönül Dilaver*

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### **IV. The Market for Kidneys: Bridging Introductory Courses in Economics and Ethics**

*Martijn Huysmans*

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### **V. An audio-walk in the (Science) Park. Outdoor learning about indoor geographical perspectives?**

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### **VI. The effect of Team-Based Learning on Pharmacology Knowledge**

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**VII. University teachers' guidance of students in setting and executing self-set professional learning goals during a Challenge-Based Learning course**

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**VIII. Digital Reading and the Twenty-First Century Historian: Doctoral Student Perspectives**

*Hope Williard*

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**IX. Quantifying Confidence: Assessing Presentation Skills and Stress Levels in Students**

*E.G.D. van Dongen, LL.M. Mphil  
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**X. Social connectedness in higher education: evidence from first year learning communities**

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**XI. An update of the Scholarship of Teaching Inventory (STI)**

*Andries S. Koster, Vincent Crone, Christel I. Lutz and Irma Meijerman*

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# I. Crashing into PPE Interdisciplinarity?

POSTER

<i>Author(s)</i>	<i>Jan Pieter Beetz</i>	<i>Key-words:</i>
<i>University</i>	<i>Utrecht University</i>	• <i>Interdisciplinarity;</i>
<i>Faculty</i>	<i>Law, Economics and Governance</i>	• <i>Game of Thrones;</i>
<i>Department</i>	<i>Utrecht University School of Governance</i>	• <i>Survey;</i>
		• <i>Educational Development'</i>

## Introduction

The UU's Philosophy, Politics and Economics + History Bachelors (PPE) started in 2018. This program innovated compared to other similar Bachelors by adopting an explicitly interdisciplinary approach. The program devoted a week in the first year to teach students the basic elements of PPE's interdisciplinary research approach. In this week, students were challenged to go through the steps in order to provide interdisciplinary analysis of food shortages in the fictitious land of Westeros from Game of Thrones. This study aimed to establish whether this training was effective students about interdisciplinarity.

## Aim and research question

The aim is to gain a better understanding of the newly developed PPE skills week on students' interdisciplinary understanding and draw lessons on how to improve the week.

Research question: In how far did the PPE skills week improve students' interdisciplinary understanding?

## Set-up and method

The research design was a survey among participating 1st year students. We took the survey at the start of the skills week and a couple of weeks after the skills week. The survey consisted of two questions. We coded the first question in line with the stages of interdisciplinary understanding and our teaching practices. The second question was often left blank and added little to the analysis.

## (Preliminary) results

The results indicate a significant improvement in students understanding. In a group of 27 students, in which we could link both results, four times more students identified integration

as a crucial part of interdisciplinarity in the second measurement than the first. The other 19 (survey moment #1) and 20 students (survey moment #2) responded without a clear identifier. Still there was a significant increase in this group: over 2,5 times more students mentioned integration.

## Conclusion

The conclusion is that the students' interdisciplinary understanding increased significantly due to this teaching intervention. Moreover, we were able to identify bottlenecks, which we will seek to improve upon in the future.

The main recommendation is that a skills week is a very effective tool to teach students about interdisciplinarity, which might benefit interdisciplinary minors and electives with little time available with interdisciplinary aspirations.

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## II. A Model for Self-Assessment of Learning Artefacts in Higher Education

POSTER

*Authors* Christian Köppe  
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*Faculty* Science Faculty Science  
*Department* Freudenthal Institute

*Key-words:*

- *Self-Assessment,*
- *Learning Artefacts,*
- *Higher Education,*
- *Conjecture Mapping,*
- *Assessment Design*

### Introduction

Self-assessment skills have long been identified as important graduate attributes. Educational interventions which support students with acquiring these skills are often included in higher education, which is usually the last phase of formal education. However, the literature on self-assessment in higher education still reports mixed results on its effects, particularly in terms of accuracy, but also regarding general academic performance. This indicates that how to foster self-assessment successfully and when it is effective are not yet fully understood. We propose that a better understanding of why and how self-assessment interventions work can be gained by applying a design-based research perspective. Conjecture mapping is a technique for design-based research which includes features of intervention designs, desired outcomes of the interventions, and mediating processes which are generated by the design features and produce the outcomes. When we look for concrete instances of these elements of self-assessment in the literature, then we find some variety of design features, but only a few desired outcomes related to self-assessment skills (mostly accuracy), and even less information on mediating processes.

### Aim and research question

What is missing is an overview of all these elements. Our aim was to provide this overview by answering the following research question: What are important elements for understanding and fostering effective self-assessment of learning artefacts in higher education?

### Set-up and method

Rapid systematic review of literature, using conjecture mapping as analytical framework. course.

## (Preliminary) results

Our review revealed 13 design features and six mediating processes, which can lead to seven desired outcomes specifically focused on self-assessment of learning artefacts.

## Conclusion

The elements form a model which describes self-assessment and can be used as construct scheme for self-assessment interventions and for research into the how and why self-assessment works.

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### III. Evaluation of a bias awareness training for teachers in bio/medical education

POSTER

<i>Author(s)</i>	<i>Gisela van der Velden<sup>1</sup>, Özge Bilgili<sup>2</sup>, Kia Malinen, Jaleesa Latupeirissaen<sup>1</sup> en Gönül Dilaver<sup>1</sup></i>	<i>Key-words:</i>
<i>University</i>	<i><sup>1</sup>Universitair Medisch Centrum Utrecht (UMCU) <sup>2</sup>Utrecht University</i>	<ul style="list-style-type: none"><li><i>• Implicit biases,</i></li><li><i>• diverse and inclusive learning environment,</i></li><li><i>• bias awareness,</i></li><li><i>• medical education,</i></li><li><i>• impact evaluation</i></li></ul>

#### Introduction

It has been shown that teachers who have an inclusive attitude in different dimensions of their teaching are able to create an inclusive learning environment, which is important for student learning and well-being. The first step in an inclusive attitude is awareness of unconscious attitudes and associations that impact how we view the world, other people, our behavior and decision-making. To create more awareness, a bias awareness training was designed based on Sukhera's seven-point framework for integrating implicit bias recognition into health professions education (3). The training was implemented for all bio/medical degree-program teachers and medical doctors teaching medical residents.

#### Aim and research question

The aim of this study is to evaluate a bias awareness training for bio/medical teachers.

#### Set-up and method

Using a mixed methods design, our study aims to evaluate the effectiveness of the training in increasing teachers' awareness and knowledge of implicit biases and their propensity to act in non-biased ways (e.g., social interactions, course materials). All teachers who followed a training session were invited to participate in this study. The first phase of our study consists of pre- and post-training survey analysis, followed by in-depth interviews conducted with teachers who have participated in the training during the second phase.

#### (Preliminary) results

Preliminary results show that participants have a better understanding of implicit bias after

following the training. The preliminary analysis also shows an increase in confidence of participants to recognize implicit bias and an increase in their ability to identify solutions for their own implicit bias. During the in-depth interviews in the second phase of this study, we discover more about the facilitators and barriers that participants experience within their teams, departments, and organization.

## Conclusion

The impact evaluation and its results are relevant to all education settings. The results offer valuable insights into how to foster inclusive a diverse bio/medical education.

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## IV. The Market for Kidneys: Bridging Introductory Courses in Economics and Ethics

POSTER

*Author(s)* Martijn Huysmans  
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*Faculty* Law, Economics and Governance  
*Department* Utrecht University School of Economics

*Key-words:*

- *Interdisciplinarity,*
- *Travelling Concepts,*
- *Video clip,*
- *Economics,*
- *Ethics,*
- *Value,*
- *Voluntariness*

### Introduction

This article contributes to the literature on interdisciplinary teaching by describing, analyzing, and evaluating an interdisciplinary intervention while students are still gaining disciplinary grounding. The intervention bridges courses in microeconomics and ethics in an interdisciplinary PPE program (Politics, Philosophy, and Economics).

### Aim and research question

The intervention focuses on the travelling concepts of voluntariness and value in a potential market for kidneys. The idea of picking a concrete topic to teach general interdisciplinary skills was motivated by the notion of authentic learning. The question is whether a 15-minute video clip on travelling concepts can help students build interdisciplinary skills.

### Set-up and method

Students in the treatment group watched a 15-minute video clip on the travelling concepts of value and voluntariness in the context of a potential market for kidneys. Students in the control group watched a clip only on the specific issue of a market for kidneys, but not using travelling concepts.

### (Preliminary) results

An exploratory survey (N=44) indicates that the intervention increases interdisciplinary skills more than the control. However, students in the control group reported a deeper interdisciplinary grasp of the specific topic of a potential market for kidneys. Hence, there seems to be some tradeoff between teaching the specific topic and teaching general interdisciplinary skills.



## V. An audio-walk in the (Science) Park. Outdoor learning about indoor geographical perspectives?

POSTER

*Authors*                    *Martijn Smit and Veronique Schutjens*  
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*Faculty*                    *Faculty of Geosciences*  
*Department*            *Human Geography & Spatial Planning*

*Key-words:*

- *Teaching & Learning approaches*

### Introduction

First year students Human Geography and Spatial Planning need to get a clear picture of different geographical concepts, perspectives and disciplines. How can we build this clear picture and get students engaged with geographical perspectives? Engagement can be stimulated when learning is linked to student experiences. Outdoor experiences may influence students' learning process and its underlying domains: cognitive (knowledge and skills), affective (emotional values) and conative (motivational) (Scott, Humphries & Henri 2019). Especially for first year students, motivational aspects are crucial to their study behavior and subsequent study progress. Outdoor learning activities can be applied in both a deductive approach (with theory preceding experience) and an inductive approach (where experience comes first – Shemwell, Chase & Schwartz 2014). Furthermore, interaction with peers can lead to interpretation, evaluation, reflection, and discussion (Simm & Marvell 2015), so that students may better engage in the outdoor experience and benefit more from it.

### Aim and research question

We aim to understand how students perceive their learning from an outdoor learning activity. Our research question is: How do students experience and report on learning from discussing an outdoor audio-walk on different geographical disciplines, and does the sequence in the course matter? We analyze students' reports on knowing about perspectives, understanding, and motivation.

### Set-up and method

In a randomized-control trial setting with interventions in the form of assignments in different phases of the course, we analyze the reflections of students who in small groups discuss their interpretations of short audio recordings at five fixed spots on a walking tour at Utrecht Sci-

ence Park. These audio recordings describe geographical and spatial planning issues from four different disciplinary angles: an urban geography, a spatial planning, an economic geography, and a cultural geography standpoint. In walking groups of four students, every student listens to one particular 'voice', and is asked to discuss and evaluate this within their group. Afterwards students write two short reflections: one individual, and one as a four-person group.

### (Preliminary) results

Students positively experienced learning from discussing an outdoor audio-walk on different geographical disciplines. They reported that their knowledge increased, although the interaction with peers (i.e., in the group) did not contribute here, in their opinion. The audio-walk stimulated students' perceived insight and understanding, and their motivation. Furthermore, students liked the group discussion about different perspectives. Regarding the sequence of the audio-walk in the course, students walking before plenary lectures reported better understanding of purpose and perspectives, and more fun than students walking after the lectures, but differences are small.

### Conclusion

The findings suggest that outdoor activities can stimulate students' knowledge, understanding and insight on different geographical perspectives, and motivation. However, for learning plenary lectures on perspectives remain necessary and the sequence of an outdoor activity in the course hardly matters to student learning. In order to increase students' course interest and a fun experience it is recommended to let an outdoor activity precede plenary lectures on the subject.

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## VI. The effect of Team-Based Learning on Pharmacology Knowledge

POSTER

<i>Authors</i>	<i>Noraly Luitjes<sup>1,2</sup>, Gisela van der Velden<sup>3</sup>, Rahul Pandit<sup>2</sup>,</i>	<i>Key-words:</i>
<i>University</i>	<i>Utrecht University</i>	<ul style="list-style-type: none"><li><i>• Team-Based Learning;</i></li></ul>
<i>Faculty</i>	<i>Medicine</i>	<ul style="list-style-type: none"><li><i>• Active Learning;</i></li></ul>
<i>Department</i>	<i><sup>1</sup>Medical Student Utrecht University, <sup>2</sup>Department of Translational Neuroscience UMCU, <sup>3</sup>Education Center UMCU</i>	<ul style="list-style-type: none"><li><i>• Pharmacology Education,</i></li><li><i>• Student Engagement;</i></li><li><i>• Learning Effectiveness;</i></li></ul>

### Introduction

The primary goal of pharmacology teaching is to prepare medical students to prescribe medications both safely and efficiently. To ensure the attainment of this educational outcome, pharmacology learning is integrated throughout various courses within the three-year Bachelor curriculum at the University Utrecht Medical School, the Netherlands (Pharmacology longitudinal thread). The majority of the teaching hours devoted to pharmacology is however taught in large groups (>100) with little teacher-student and student-student interaction. In a recent evaluation of the curriculum, students indicate their appreciation for the pharmacology teaching, but students indicate attending these teaching moments unprepared, resulting in passive learning. To increase student engagement with the subject matter, Team-Based Learning (TBL) was implemented to facilitate learning through interaction, critical thinking, problem solving and reflection. TBL is based on six steps from lesser cognitive learning to a deeper cognitive learning. Teaching is contextual and educational practices successfully implemented at one institution do not necessarily have to be equally successful in other institutions. As implementing TBL throughout the entire Pharmacology curriculum is an intensive process, it is important to first understand the strengths, weaknesses and effectiveness of TBL within our educational context.

### Aim and research question

The goal of the study is to understand the effectiveness of TBL as an educational tool for teaching pharmacology to first-year medical students. As TBL has several components (e.g., formative testing, group work), we first investigated student perception on the various components of TBL as a teaching/learning methodology. Secondly, we investigated the effects of TBL on student performance in the exam.

## Set-up and method

The study took place in academic years 2021-2022 and 2022-2023 at University Utrecht Medical School during the first-year bachelor course on cardiovascular diseases. A total of 686, 2021-2022 (n=348) and 2022-2023 (n=338) were enrolled in the course and also completed the exam, of which 196 students followed TBL. To understand student perception on TBL as a learning method, data from an online questionnaire was analyzed using a 5-point Likert scale. Student performance is analyzed by comparing the student performance in pharmacology-related questions in the exam between TBL-attendees and non TBL-attendees.

## (Preliminary) results

Student satisfaction with TBL is high, however, their confidence in knowledge in Pharmacology is moderate. Furthermore, TBL-attendees perform better on pharmacology-related questions in the exam compared to non TBL-attendees.

## Conclusion

TBL is an engaging and efficient method to teach pharmacology. It positively affects student learning and performance. It should be broadly applied within the medical curriculum.

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## VII. University teachers' guidance of students in setting and executing self-set professional learning goals during a Challenge-Based Learning course

POSTER

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*Key-words:*

- *Challenge-Based Learning,*
- *goal-setting,*
- *teacher as coach*

### Introduction

Educational innovation is part of universities and we expect (implicitly) from our teachers to have the ability to teach in new situations almost immediately. The same holds for Challenge-Based Learning (CBL), where students work in teams on a complex problem and individually on their own skill development, with a lot of freedom to personalize their learning. Goal-setting can help students to direct attention and effort to relevant activities, especially when students set their own, more meaningful goals (Moeller et al., 2012). Guiding students in goal-setting is traditionally often not part of the role of university teacher and require skills and knowledge. Although researchers have provided suggestions, such as one-on-one conversations (Roberts, 2019), the specifics remain unclear.

### Aim and research question

As instruction has been found to be effective for students' goal-setting abilities, we wanted to get insight in: "How do teachers guide students in formulating and executing self-set learning goals during CBL and what do teachers need in terms of skills and knowledge?".

### Set-up and method

The 7.5 ECTS course was based on the CBL learning guide (Nichols et al., 2016) and given in 2022 over a time-period of 10 weeks. Students demarcated in interdisciplinary groups a big idea to a concrete challenge, analysed the problem, and developed a solution. Teachers had three individual conversations for which students prepared a written document with reflections and evidence regarding their learning goals and development. Four teachers guided between 3-5 students each, accumulating to 15 students in total. All teachers identified as female and differed in discipline, teaching experience, and CBL experience. Thirty-minute semi-structured interviews with three topics were held with all four teachers.



## VIII. Digital Reading and the Twenty-First Century Historian: Doctoral Student Perspectives

POSTER

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*Key-words:*

- *Doctoral students;*
- *history education;*
- *researcher development;*
- *digital skills development*

### Introduction

Digital reading is a fundamental part of research in the twenty-first century: historians produce, consume, and interact with all manner of information in online environments. While previous studies of the research practices of historians have been done by librarians and scholars such as Kim Martin, Jennifer Rutner, and Roger C. Schonfeld, there has been little investigation of the process by which PhD students in history learn the digital skills they need to be successful in their research.

### Aim and research question

It is often assumed that students begin PhD study having acquired digital skills at MA and PhD level. This paper blends interview research with current and recent PhD students, and the perspective of a librarian-researcher with six years' experience working with doctoral students, to suggest otherwise.

### Set-up and method

Eight semi-structured interviews were conducted with doctoral students who are currently enrolled in or have recently completed doctoral degrees at universities in the United Kingdom were conducted as part of a 2022-2023 Professional Practice Fellowship funded by the Arts and Humanities Research Council and Research Libraries UK. Student participants were solicited via the mailing lists of national organisations such as the Royal Historical Society, social media, and internal university message boards.

### (Preliminary) results

Interviewees were asked to reflect on their definition of digital skills, their experiences of learning to use digital tools and resources for their research, and how the coronavirus pandemic has impacted their use of digital resources for their work. While participants shared

experiences of digital reading and resources benefitting their work and taking their research in new directions, they also shared experiences of anxiety and frustration that led them to prefer working with physical research materials.

## Conclusion

By understanding 'pain points' in experiences of digital research, librarians, archivists, and supervisors can better support and guide research students, helping them make confident and effective use of the best resources for their work.

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## IX. Quantifying Confidence: Assessing Presentation Skills and Stress Levels in Students

POSTER

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<i>University</i>	<i><sup>1</sup>Utrecht University, <sup>2</sup> HU</i>	<ul style="list-style-type: none"><li><i>Teaching &amp; Learning approaches,</i></li></ul>
<i>Faculty</i>	<i>University of Applied Sciences Utrecht</i>	<ul style="list-style-type: none"><li><i>Academic Skills</i></li></ul>
<i>Department</i>	<i><sup>1</sup>Department of Law, <sup>2</sup>Research Group Digital Ethics</i>	

### Introduction

Students often experience stress and fear when presenting in class and receiving feedback by the teacher or peer. Two recent higher education studies aimed to investigate the potential of Virtual Reality (VR) for practicing presentations and receiving feedback in order to support students with overcoming this fear. In one of these studies (UU), students received feedback by peers and/or the teacher after a presentation ('pleading') practice in a VR court room. In the other study (HU), students received automated feedback messages after presenting in a VR classroom setting, which was compared to receiving automated feedback provided by a teacher. In both studies, students provided a real-life presentation in similar settings, assessed by experts, after the VR practice. Both studies aimed to investigate the impact of the VR presentation task on students' stress/anxiety levels and competences.

### Aim and research question

What effects have presenting and receiving feedback in virtual reality presentation tasks on students' anxiety levels and/or arousal in higher education?

### Set-up and method

Stress affects our degree of confidence. Therefore, in the study of the UU, a (validated) questionnaire was used to measure the confidence over time (beginning, after VR and after the course) (n=66). Besides, physiological instruments were used to measure electrodermal activity and heart rate while presenting in VR (n=27). In the study of the HU, public speaking anxiety was measured using (validated) questionnaires at two moments (beginning and end of the experiment, n = 60).



## X. Social connectedness in higher education: evidence from first year learning communities

POSTER

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*Key-words:*

- *First-year experience,*
- *learning communities,*
- *classroom social climate,*
- *peer interactions,*
- *teacher interactions*

### Introduction

First-year learning communities (FLCs) are known to improve student integration, retention and learning (Tinto, 1997; Zhao & Kuh, 2004). However, the classroom social climate within FLCs and its potential role in contributing to these outcomes of FLCs have not been studied.

### Aim and research question

The aim of our research is to elucidate students' perceptions of the social climate within the Utrecht Undergraduate Pharmacy FLCs by exploring students' perceptions and valuation of peer and teacher interactions within these FLCs, relate these perceptions to the dimensions of the classroom social climate and clarify which factors help or hinder a positive perception.

### Set-up and method

Fourteen first-year students from the cohort 2020-2021 participated in semi-structured individual interviews in the first (T1), second (T2) and fourth period (T3) of the first year.

### (Preliminary) results

Our results show that FLC interactions are positively valued when students experience learning support from peers and teacher, social connectedness with peers and teacher, and active participation in class activities. These learning environment characteristics correspond to the classroom social climate dimensions student cohesiveness, student involvement and personalization (Fraser et al, 1986). Students' valuation of FLC interactions are influenced by a variety of factors of which online classes hampered all valued classroom social climate dimensions and thereby had a huge impact on the valuation of FLC interactions. Furthermore, social connectedness with peers and teacher was not only one of the most valued classroom climate aspects, but also indirectly influenced the other two valued social climate aspects learning support and active participation.

## Conclusion

The results of our study not only provide insight in the process of students' academic and social integration, but also on how to promote this integration on a classroom level. Moreover, our study highlights the importance of social connectedness in the online and face-to-face classroom which, in our opinion, needs an increased amount of attention in higher education.

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## XI. An update of the Scholarship of Teaching Inventory (STI)

POSTER

<i>Author(s)</i>	<i>Andries S. Koster<sup>1</sup>, Vincent C.A. Crone<sup>2</sup>, Christel I. Lutz<sup>3</sup> and Irma Meijerman<sup>1</sup></i>	<i>Key-words:</i> • ...
<i>University</i>	<i>Utrecht University</i>	
<i>Faculty</i>	<i><sup>1</sup>Science, <sup>2</sup>Humanities, <sup>3</sup>University College</i>	
<i>Department</i>	<i><sup>1</sup>Pharmaceutical Sciences, <sup>2</sup>Media and Culture Studies</i>	

### Introduction

Many educational institutions, including Utrecht University, invest in teacher professionalization and development of SoTL. In addition to the Approaches to Teaching Inventory (ATI), Trigwell [1] piloted a questionnaire tool, the Scholarship of Teaching Inventory (STI), where four epistemological dimensions of a scholarly approach to teaching (teaching as a public activity, use of theory and literature, learning inquiry and review by colleagues) are found.

### Aim and research question

The purpose of this study was to validate the Scholarship of Teaching Inventory (STI) as a tool for monitoring the development of SoTL at Utrecht University.

### Set-up and method

A pilot-version of the STI (36 items; kindly provided by dr. Trigwell, Sydney) was distributed to all scientific staff in 2021. The factor structure was investigated using Principal Component Analysis and Promax oblique rotation as factoring algorithms (SPSS 25)

### (Preliminary) results

Data were obtained from 211 teachers, distributed over all faculties, and representing ca. 8 % of the total University teaching staff. The 36-item STI (5-point Likert scales, range 1-5) was optimized by selecting items with minimal cross loadings, high communalities and a limited number of statistically significant residual correlations. The analysis resulted in a 20-item, 4-factor solution with good face validity and 60.3% explained variance. The four factors were slightly different from the factors described by Trigwell, and were named 'good teaching'

(Mean =  $4.12 \pm 0.53$ , Cronbach's alpha = 0.747, using reflection and inquiry, comparable to 'learning inquiry'), 'theory-driven' (M =  $3.23 \pm 0.84$ , alpha = 0.848, use of models/frameworks, an aspect of 'theory'), 'evidence-based' (M =  $3.45 \pm 0.77$ , alpha = 0.868, use of literature, a second aspect of 'theory') and 'collaborative' (M =  $3.35 \pm 0.68$ , alpha = 0.737, comparable to 'review by colleagues').

## Conclusion

The updated version of the STI can be used to quantify four key dimensions of a scholarly approach to teaching and will be used to characterize and monitor development of SoTL in Utrecht University.

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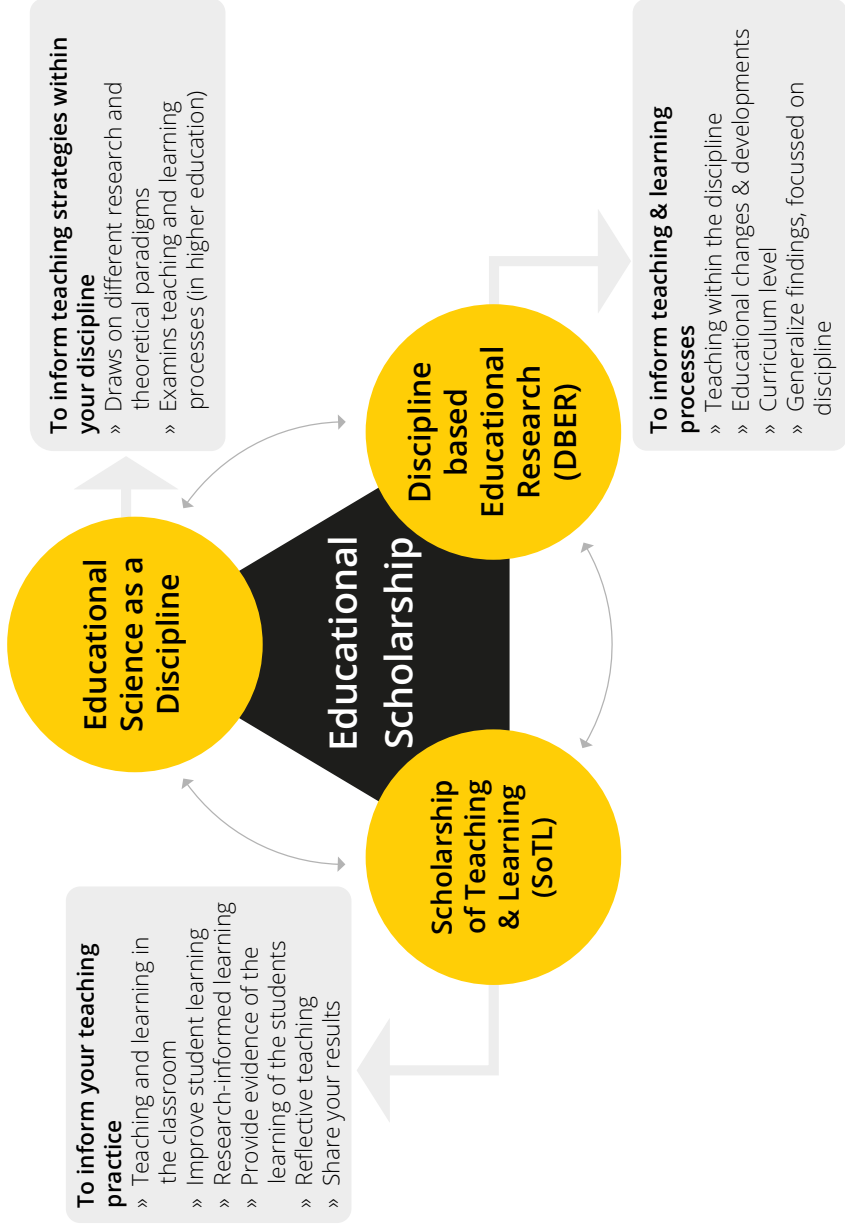








**Figure 1. Different approaches of Educational Scholarship**





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